What is claimed is:

1. A master tool for manufacturing a production tool useful to manufacture an abrasive article that comprises a major surface having deployed in fixed position thereon first and second three-dimensional abrasive composites, each of said composites comprising abrasive particles dispersed in a binder and having a shape defined by a substantially distinct and discernible boundary which includes substantially specific dimensions, wherein said first abrasive composite has a first shape having specific first dimensions and said second abrasive composite has a second shape having second specific dimensions, wherein each of said abrasive composites has a boundary defined by at least four planar surfaces wherein adjacent planar surfaces of one composite meet at an edge to define an angle of intersection therebetween, wherein at least one angle of intersection of said first abrasive composite is different from all of the angles of intersection of said second composite, said master tool comprising a structure having a major surface having a plurality of adjacent three-dimensional shapes projecting therefrom, wherein each three-dimensional shape is defined by a substantially distinct and discernible boundary which includes substantially specific dimensions, wherein a first three-dimensional shape has a first shape having specific first dimensions and a second three-dimensional shape has a second shape having second specific dimensions, wherein each of said three-dimensional shapes has a boundary defined by at least four planar surfaces wherein adjacent planar surfaces of one three-dimensional shape meet at an edge to define an angle of intersection therebetween, wherein at least one angle of intersection of said first three-dimensional shape is different from all angles of intersection of said second three-dimensional shape.

2. The master tool of claim 1, wherein said three-dimensional shapes comprise pyramids.

3. The master tool of claim 2, wherein each said pyramid comprises planar surfaces which intersect to form a material-included angle at a distal end of said pyramid, wherein said material-included angle is a value from 25° and 90°.

4. The master tool of claim 1, comprised of a metal material.

5. The master tool of claim 4, wherein said master tool surface is nickel-plated.

6. A master tool for manufacturing a production tool useful to shape an abrasive slurry into an array of three-dimensional nonidentical abrasive composites, said master tool having a major surface extending within a first imaginary plane, said master tool being made by a method comprising the steps of:

(1) determining angles corresponding to facing right and left planar surfaces of adjacent three-dimensional shapes and wherein each of said angles has a value as measured between its planar surface and a plane which extends in a normal direction to said major surface and contains an edge of said planar surface in contact with said major surface, by the following substeps:

(i) selecting an angle value between, but not including, 0° and 90° to establish a first right half angle of a first right planar surface of a first right-side three-dimensional shape with a random number generating means capable of randomly selecting an angle value between, but not including, 0° and 90°;

(ii) selecting an angle value between, but not including, 0° and 90° with said random number generating means to establish a first left half angle for a first left planar surface of a first left-side three-dimensional shape facing said first right planar surface of said first right-side three-dimensional shape;

(iii) proceeding along a first direction extending linearly within said first imaginary plane to a second left planar surface of a second left-side three-dimensional shape located adjacent said first left-side three-dimensional shape and using said random number generating means to select a value between, but not including, 0° and 90° to establish a second left planar angle for said second left planar surface;

(iv) using said random number generating means to select a value between, but not including, 0° and 90° for a second right planar surface of a second right-side three-dimensional shape facing said second left planar surface;

(v) proceeding along said first direction to a third right-side three-dimensional shape located adjacent said second right-side three-dimensional shape;

(vi) repeating said substeps (i), (ii), (iii), (iv), and (v), in that sequence, at least once;

(2) repeating step (1) except that the angles are determined for left and right planar surfaces of adjacent three-dimensional shapes deployed in two adjacent rows in a second direction extending linearly within said first imaginary plane, wherein said first and second directions intersect;

(3) using means to determine, for a given width of said surface of said master, locations of grooves required to be cut by a cutting means to form a series of intersecting grooves defining a plurality of three-dimensional shapes having said angles calculated by steps (1) and (2); and

(4) providing a cutting means to cut grooves in said surface of said master in correspondence to said angles calculated by steps (1) and (2) and said groove locations determined by step (3) to form a series of intersecting grooves which define a plurality of three-dimensional shapes upraised from said surface, each of said shapes being defined by a distinct and discernible boundary including specific dimensions, wherein not all said three-dimensional shapes are identical.

7. The master tool of claim 6, wherein said right and left half angles each have a value between 8° and 45°.

8. The master tool of claim 6, wherein said three-dimensional shapes comprise pyramids.

9. The master tool of claim 6, wherein each said pyramid comprises planar surfaces which intersect to form a material-included angle at a distal end of said pyramid, wherein said material-included angle is a value from 25° and 90°.

10. The master tool of claim 6, wherein said cutting means comprises a diamond cutting tool.

11. The master tool of claim 6, comprised of a metal material.

12. The master tool of claim 6 wherein said major surface is nickel-plated after completing said step (4).

13. The master tool of claim 6, wherein said first and said second directions are oriented perpendicular to each other.

14. A production tool for manufacturing an abrasive article that comprises a major surface having deployed in fixed position thereon first and second three-dimensional abrasive composites, each of said composites comprising abrasive particles dispersed in a binder and having a shape defined by a substantially distinct and discernible boundary which includes substantially specific dimensions, wherein said first abrasive composite has a shape having specific first dimensions and said second abrasive composite has a second shape having second specific dimensions, wherein each of said abrasive composites has a boundary defined by at least four planar surfaces wherein adjacent planar surfaces of one composite meet at an edge to define an angle of intersection therebetween, wherein at least one angle of intersection of said first abrasive composite is different from all of the angles of intersection of said second composite, said production tool comprising a structure having a plurality of adjacent three-dimensional cavities form on a major surface thereof, wherein each three-dimensional cavity is defined by a substantially distinct and discernible boundary which includes substantially specific dimensions, wherein a first three-dimensional cavity has a first shape having specific first dimensions and a second three-dimensional cavity has a second shape having second specific dimensions, wherein each of said three-dimensional cavities has a boundary defined by at least four planar surfaces wherein adjacent planar surfaces of one three-dimensional cavity meet at an edge to define an angle of intersection therebetween, wherein at least one angle of intersection of said first three-dimensional cavity is different from all angles of intersection of said second three-dimensional cavity.

15. The production tool of claim 14, wherein said three-dimensional cavities comprise geometrical shapes.

16. The production tool of claim ~~14~~, wherein said geometrical shapes are selected from the group of geometrical shapes consisting of cubic, prigmatic, pyramidal and truncated pyramidal shapes.

~~17. The production tool of claim 16, wherein each said pyramidal shape~~ comprises planar surfaces which ~~intersect to form~~ a material-included angle at a distal end ~~of said pyramid, wherein said material-included angle is a value from 25° and 90°.~~

18. The production tool of claim 14, comprised of a material selected from the group consisting of metal, metal ~~alloy~~ and plastic.

~~19. A production tool useful to shape an abrasive slurry into an array of~~ three-dimensional nonidentical abrasive composites, said production tool manufactured from a master tool, said master tool being made by a method comprising the steps of:

(1) determining angles corresponding to facing right and left planar surfaces of adjacent three-dimensional shapes and wherein each of said angles has a value as measured between its planar surface and a plane which extends in a normal direction to said major surface and contains an edge of said planar surface in contact with said major surface, by the following substeps:

(i) selecting an angle value between, but not including, 0° and 90° to establish a first right half angle of a first right planar surface of a first right-side three-dimensional shape with a random number generating means capable of randomly selecting an angle value between, but not including, 0° and 90°;

(ii) selecting an angle value between, but not including, 0° and 90° with said random number generating means to establish a first left half angle for a first left planar surface of a first left-side three-dimensional shape facing said first right planar surface of said first right-side three-dimensional shape;

(iii) proceeding along a first direction extending linearly within said first imaginary plane to a second left planar surface of a second left-side ~~three-dimensional shape located adjacent said first left-side three-dimensional shape and~~

using said random number generating means to select a value between, but not including, 0° and 90° to establish a second left planar angle for said second left planar surface;

(iv) using said random number generating means to select a value between, but not including, 0° and 90° for a second right planar surface of a second right-side three-dimensional shape facing said second left planar surface;

(v) proceeding along said first direction to a third right-side three-dimensional shape located adjacent said second right-side three-dimensional shape;

(vi) repeating said substeps (i), (ii), (iii), (iv), and (v), in that sequence, at least once;

(2) repeating step (1) except that the angles are determined for left and right planar surfaces of adjacent three-dimensional shapes deployed in two adjacent rows in a second direction extending linearly within said first imaginary plane, wherein said first and second directions intersect;

(3) using means to determine, for a given width of said surface of said master, locations of grooves required to be cut by a cutting means to form a series of intersecting grooves defining a plurality of three-dimensional shapes having said angles calculated by steps (1) and (2); and

(4) providing a cutting means to cut grooves in said surface of said master in correspondence to said angles calculated by steps (1) and (2) and said groove locations determined by step (3) to form a series of intersecting grooves which define a plurality of three-dimensional shapes upraised from said surface, each of said shapes being defined by a distinct and discernible boundary including specific dimensions, wherein not all said three-dimensional shapes are identical.

20. The production tool of claim 14 comprising a roll.

21. The production tool of claim 20 comprising a coating roll.